

REMARKS

The Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

I. Status of the Claims

Claim 4 has been canceled without prejudice to further prosecution on the merits.

Claims 5 and 6 are currently being amended.

Claims 5-11, 13, 16-20, 23, 24, 27, 29, 31, 32, 34, and 35 are now pending in this application.

II. Claim Rejections – 35 U.S.C. § 112 ¶ 2

On page 2 of the Office Action, the Examiner rejected Claim 4 under 35 U.S.C. § 112 ¶ 2. The Examiner stated:

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements between “the pistons” and “expandable portion”, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim 4 has been canceled. The elements of Claim 4 have been rewritten to properly correlate the combination of elements recited therein and have been included in amended independent Claims 5 and 6. The Applicants therefore request that the rejection of Claim 4 under 35 U.S.C. § 112 ¶ 2 be withdrawn.

III. Claim Rejections – 35 U.S.C. § 102(e)

On pages 2-3 of the Office Action, the Examiner rejected Claims 4, 16, 17, 27, and 29 as being anticipated by U.S. Patent No. 6,457,532 (“Simpson”) under 35 U.S.C. § 102(e).

The Examiner stated in part:

The claimed elliptical members or expandable disc is anticipated by rollers 902 of Fig. 30 and disc shaped rollers are anticipated by Figs 13b, where disc rollers are anticipated to create grooves 204. The stepped profile mandrel in Fig. 27 having rollers 612 and 616 creating stepped profile in adjacent

stages at an incremental diameter changes depending on the direction of the roller movement. More specifically, the language “preceding stage” fails to positively distinguish from Fig. 27, for lacking a specific directional orientation.

Claims 4 has been canceled. As discussed in further detail below, Simpson does not identically disclose the combination of elements recited in independent Claims 16, 17 and 27.

A. Claim 16

Simpson does not identically disclose the combination of elements recited in independent Claim 16. Simpson (see Figure 30) discloses a plurality of rollers, each roller having “a longitudinally central portion which is near-cylindrical and slightly barrelled (i.e. slightly convex), bounded on either side by end portions which are conical.” (Col. 16, lines 38-40). “The conical end portions of each roller 902 each run on a respective one of two conical races 906 and 908 and whose longitudinal separation determines the radial displacement of the rollers 902.” (Col. 16, lines 50-54). Thus, the conical surfaces of the rollers engage the conical races, and the locations of these interfaces upon the conical races determine the radial displacement of the rollers.

Claim 16 recites a combination including, among other elements, a roller and an axle, wherein “the roller comprises elliptical members having an interior engagement surface” and “wherein the interior engagement surface of the roller travels along a circumference of the axle,” which is not identically disclosed in Simpson. Accordingly, independent Claim 16 is not anticipated by Simpson under 35 U.S.C. § 102(e) and is patentable.

B. Claim 17

Simpson does not identically disclose the combination of elements recited in independent Claim 17. Simpson (see Figure 30) discloses a single tool with a variable “effective working diameter.” (Col. 16, line 47). The radial displacement of the rollers shown in Figure 30 may determine the effective working diameter of the tool, but the rollers themselves do not expand.

Claim 17 recites a combination including, among other elements, a “plurality of expandable discs,” which is not identically disclosed in Simpson. Accordingly, independent Claim 17 is not anticipated by Simpson under 35 U.S.C. § 102(e) and is patentable.

C. Claims 27 and 29

Simpson does not identically disclose the combination of elements recited in independent Claim 27. Simpson (see Figure 27) discloses a combination of conical and cylindrical expanders or varying diameter, including a first-stage expander and a second-stage expander. As stated in the specification, “[t]he diameter of the leading (narrow) end of the second-stage expander 616 (the lower end of the expander 616 as viewed in FIG. 27) is marginally less than the diameter of the trailing (wide) end of the first-stage expander 612 (the upper end of the expander 612 as viewed in FIG. 27).” (Col. 15, lines 7-12). Also, between each of the expanders is an interstage coupling that, as shown in Figure 27, has a diameter less than that of either of the neighboring expanders. Thus, the diameter of the device disclosed in Figure 27 of Simpson alternately increases and decreases between adjacent sections along the length of the device.

Claim 27 recites a combination including, among other elements, a “stepped profile being formed of adjacent stages, each stage having a smaller diameter than the preceding stage along the direction of movement of the mandrel during expansion,” which is not identically disclosed in Simpson. On page 3 of the Office Action, the Examiner stated that “the language ‘preceding stage’ fails to positively distinguish from Fig. 27, for lacking a specific directional orientation.” The Applicants respectfully submit that Claim 27 properly recites a specific directional orientation as being “along the direction of movement of the mandrel during expansion.” Accordingly, independent Claim 27 (and corresponding dependent Claim 29) is not anticipated by Simpson under 35 U.S.C. § 102(e) and is patentable.

IV. Claim Objections

On page 3 of the Office Action, the Examiner objected to Claims 5-8 and 18 as being dependent upon a rejected base claim. Claims 5 and 6 have been rewritten in independent form and recite all of the limitations of the base claim and any intervening claims. Claims 7 and 8 now depend from amended independent Claim 6. Claim 18 depends from independent Claim 17 which, as discussed above, the Applicants believe is presently in condition for allowance. The Applicants therefore respectfully request that the objection to Claims 5-8 and 18 be withdrawn.

V. Allowed Claims

On page 3, the Examiner indicated that Claims 9-11, 13, 18-20, 23, 24, 31, 32, 34, and 35 are allowed. The Applicants note that Claim 18 has also been objected to in the present Office Action. The Applicants have addressed the objection accordingly to put Claim 18 in proper form for allowance. The Applicants thank the Examiner for the notice of allowability for these claims.

The Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of

papers submitted herewith, the Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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By 

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